UNITED STATES PATENT AND TRADEMARK OFFICE **CERTIFICATE OF CORRECTION**

PATENT NO.

: 7,172,570 B2

Page 1 of 2

APPLICATION NO.: 10/765149

DATED

: February 6, 2007

INVENTOR(S)

: Silvio Cavalcanti et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In claim 1, column 28, line 11, " (q_b, q_u) " should read -- (q_b, q_{uf}) --.

In claim 9, column 29, line 42, ("Pa, Pv,)" should read --(Pa, Pv)--.

In claim 11, column 30, line 41, "comprising;" should read --comprising:--.

In claim 12, column 31, lines 42-43, "(Paf, Pam, Pvf, Pvm,)" should read --(P_{af}, P_{am}, P_{vf}, P_{vm})--.

In claim 15, column 32, line 19, "pump:" should read --pump;--.

In claim 16, column 32, line 60, " (q_b, q_f) " should read -- (q_b, q_{uf}) --.

In claim 17, column 33, line 12, "blood and" should read --blood; and--.

In claim 20, column 33, line 61, "(N_A, N_V)" should read --(N_A, N_V)--.

In claim 20, column 33, line 65, "(N_A, N_V)" should read --(N_A, N_V)--.

In claim 21, column 34, lines 23-24, "(Paf, Pam, Pvf, Pvm)" should read --(Paf, Pam, Pvf, P_{vm})--.

In claim 21, column 34, line 26, "(q_b, q_{uf}," should read --(q_b, q_{uf})--.

In claim 22, column 34, line 55, "blood and" should read --blood; and--.

In claim 23, column 35, line 16, "claims 1, 9, 10, 11, 12-15, 16, 17-20, and 21-8." should read --claims 1 and 8-22.--.

In claim 24, column 36, line 6, "the blood wherein the said blood" should read -- the blood, wherein said blood--.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In claim 24, column 36, line 16, "(R_d , R_f , R_v , q_a , q_f , q_a)" should read $--(R_d, R_f, R_v, q_a, q_f, q_v)--.$

Signed and Sealed this

Twenty-second Day of May, 2007

JON W. DUDAS Director of the United States Patent and Trademark Office